Appendix A

Method for determining participation in speakers' bureaus by top 5 publishing cardiologists at Canadian academic centres

The data shown in Figure 1 were generated in 3 steps, which led to exclusion of 4 of the 17 Canadian medical schools.

First, in accordance with the 2003–2004 study by Campbell and colleagues,[15] which found an elevated incidence of participation in speakers' bureaus among cardiologists, we identified all Canadian medical schools with a publicly available list of faculty practising in the field of cardiology. Some of the medical schools had cardiology departments, whereas others had institutes or hospitals dedicated to cardiovascular medicine and research. We excluded from our analysis 3 medical schools that did not have a web-accessible list of cardiologists affiliated with the school: Memorial University of Newfoundland's Faculty of Medicine, the Northern Ontario School of Medicine, and the Faculty of Medicine and Health Sciences at Université de Sherbrooke.

Second, using the Web of Science database (Thomson Reuters, New York, NY), for each of the 14 medical schools remaining after the first step, we identified the top 5 publishing cardiologists during the period 2006–2012. We did this by cross-referencing the list of the top 100 authors by record count from the Web of Science database with each publicly available list of medical school faculty affiliated with a cardiology department, related institute, or hospital. Through this process, we ensured that no cardiologist was counted twice (i.e., if she or he had changed medical schools during the period of interest). This second step eliminated another medical school from our sample (the University of Saskatchewan College of Medicine), as we could not identify 5 cardiologists affiliated with the university among the top 100 authors list generated by the Web of Science database. Using a larger number of cardiologists (e.g., 10) would have eliminated several other medical schools from our sample. Although a number of researchers at each medical school were actively publishing in the field of cardiology, many were not directly affiliated with the cardiology department, unit, or institute. For consistency, we included only those researchers with an appointment in such department, unit, or institute.

Third, we searched Google Scholar for any disclosures of paid speaking arrangements with pharmaceutical companies made between 2006 and 2012 by the cardiologists identified in the second step. We did not count disclosures of other types of paid speaking arrangements (e.g., on behalf of a charitable foundation). Rather, we defined as participation in a speakers' bureau any disclosure of receipt of "lecture fees" or a "speaker's honorarium" or being "paid to speak for" or participating on a "speakers' bureau" sponsored by one or more pharmaceutical, medical device, or private health care companies. Only cardiologists who made one or more such disclosures were counted as having participated in a speakers' bureau (shown in bright blue in Figure 1). However, some journals lump speakers' bureau participation and honoraria into the same category of disclosure. Thus, those cardiologists who disclosed "honoraria" only (shown in blue–green in Figure 1)—as opposed to "speaker's honoraria" specifically—may in fact have participated in a speakers' bureau as well, elevating the level of participation in speakers' bureaus to 100% (i.e., 5 of the top 5 publishing cardiologists) in 2 cases.

We believe these data likely underestimate the level of participation in speakers' bureaus among cardiologists, as we did not review every publication that cardiologists produced and because journals may not consistently enforce, or authors may not consistently follow, disclosure requirements. Our goal in assembling these data was simply to demonstrate that participation in speakers' bureaus is common—at least among high-publishing members of one specialty—in Canada, thus setting the stage for our argument that such participation amounts to peer selling.